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Grain Transportation Prospects



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This report is available on the Internet at http://www.ams.usda.gov/tmd/mta/mta_special_reports.htm. Contact Karla Martin at karla.martin@usda.gov, phone 202-720-8264, with questions.

Summary

Production estimates for the 2000/2001 U.S. corn, sorghum, barley, oats, wheat, rye, and soybean crops total 15.9 billion bushels. This brings the grain (excluding rice) and soybean production crop up 3 percent from 1999/2000 and 6 percent above the 5-year average. With beginning stocks for 2000/2001 at approximately 3.21 billion bushels and imports projected at approximately 233 million bushels, the available total supplies are estimated at 19.34 billion bushels.

Grain (excluding rice) and soybean stocks, as of December 1, 2000, were reported at 13.2 billion bushels in all positions, up approximately 376 million bushels, or 3 percent, from 1999 but up 14 percent from the 5-year average (table 2). This is the highest level of December 1 stocks since 1987 when stocks for corn, wheat, and soybeans totaled 14.0 billion bushels. On-farm stocks accounted for 58 percent of the total and were reported at 7.66 billion bushels, up 5 percent from 1999 and 13 percent above the 5-year average. Off-farm stocks were reported at 5.53 billion bushels, down slightly (16 million bushels) from the previous year.

U.S. corn production is estimated at 9.97 billion bushels, with 79.6 million acres planted and 72.7 million acres harvested. The yield per harvested acre is projected at 137.1 bushels. The total corn use is projected at 9.81 billion bushels. The January 11 *Grain Stocks* report puts corn stocks in all positions at 8.52 billion bushels, up 6 percent from December 1, 1999, and the highest level since 1987. Of the total stocks, 5.55 billion bushels were stored on farms, up 7 percent. Also, 2.97 billion bushels were stored off farms, up 4 percent from the previous year.

Also, soybean production is estimated for 2000/2001 at 2.77 billion bushels, with 74.5 million acres planted and 72.7 million acres harvested (38.1 bushels per harvested acre). The average price received by farmers is projected between \$4.50 and \$4.80 per bushel. December 1 soybean stocks in all positions were reported in the January 11 *Grain Stocks* report at 2.24 billion bushels, up 3 percent from December 1, 1999. While the on-farm stocks were estimated at 1.22 billion bushels, off-farm stocks were at 1.02 billion bushels.

U.S. production of all wheat is estimated at 2.22 billion bushels for 2000/2001, down 3 percent from the previous year. Domestic use is projected at 1.33 billion bushels, up 29 million bushels from the previous year. While imports remain the same at 95 million bushels, exports climbed slightly to 1.10 billion bushels. Total wheat use is projected at 2.43 billion bushels. The

January 11 Grain Stocks report puts wheat stored in all positions on December 1, 2000, at 1.8 billion bushels, down 4 percent from a year ago. On-farm stocks, estimated at 623 million bushels, were down 4 percent from the previous year; while the off-farm stocks, estimated at 1.18 billion bushels, were down 5 percent from a year ago.

The year 2000 was a good year for the ocean shipping industry. More vessels were built and operated last year than in an average year. Additional vessels in 2000 were expected to reduce the ocean rates; however, higher oil prices increased the cost of all modes of transportation including ocean vessels. The higher ocean freight rates that started rising the second quarter of 1999 continue.

Harsh winter weather and repair work have disrupted grain barge traffic on the Mississippi and Illinois Rivers. In a normal winter, many of the Mississippi River locks are closed to navigation during January and February. This year, persistent freezing temperatures at some of the open lock sites caused ice accumulations that temporarily limited the maximum size of barge tows. As of December 29, 2000, the main 1,200-foot chamber at Melvin Price (MP) Locks and Dam (Alton, IL) was closed to repair a failed miter gate. As a result of the closure, all MP traffic must use the smaller 600-foot auxiliary chamber. Barge movements have experienced extensive delays at MP and may expect continued delays throughout the lengthy repair process.

During fall 2000, grain shippers appeared not to have been affected by any significant rail transportation problems. Ground piling of grain during the fall was not the result of transportation shortages.

Both, Union Pacific (UP) and Burlington Northern Sante Fe (BNSF) have continued to focus on improving customer service. Except for brief periods of service disruption in those regions experiencing winter storms, the western railroads have been fluid. Service was disrupted in the second half of December due to snow in Chicago, Minnesota, and Iowa. Also, a New Year's Day ice storm and snow briefly disrupted service in the Arkansas and Louisiana regions.

The eastern railroads have recovered much of the grain traffic lost due to the service disruptions that began in the latter half of 1999. Grain cars originated in the fourth quarter of 2000 increased 12.1 percent over the comparable period in 1999 (84,378 railcars versus 75,248) but were still 1.5 percent fewer than those originated in the comparable period of 1998. This recovery

of grain traffic has continued into the first 3 weeks of 2001.

Nearing the end of a federally imposed 15-month moratorium on railroad mergers, Class I railroads are focusing their efforts on improving service and reliability, both top priorities for 2001. Some major railroads are entering into partnerships and alliances as a way of operating and providing service together instead of merging. BNSF and Canadian National (CN) railroads, for example, have teamed up in an agreement to haul grain in Iowa, Illinois, and the Pacific Northwest. Also, at the top of Class I agendas for early 2001 is continued participation in the Surface Transportation Board's

(STB) development of new rail merger regulations, which are scheduled to be issued by June 11, 2001. Most Class I railroads implemented fuel cost recovery surcharges beginning in the fourth quarter of 2000. The surcharges are being imposed to offset the rising cost of fuel and will be adjusted to reflect the market price of oil.

The trucking industry experienced high costs and volatile pricing throughout 2000. This whittled away at the smaller operating margins for some established trucking firms. With these financial problems, trucking industry bankruptcies are likely to continue.

This report is prepared and compiled by USDA's Agricultural Marketing Service. It contains information provided by the National Agricultural Statistics Service, the World Agricultural Outlook Board, Economic Research Service, Farm Service Agency, and other USDA agencies. It is approved for release by the World Agricultural Outlook Board and the USDA/STB Logistics Task Force. For questions concerning this report, contact Karla A. Martin, USDA/Agricultural Marketing Service/Marketing and Transportation Analysis, 202-720-8264, karla.martin@usda.gov. Unless otherwise referenced, information in this report was extracted from the January 11, 2001, Crop Production: 2000 Summary, the Grain Stocks report, and the February 8, 2001, World Agricultural Supply and Demand Estimates.

Grain Market Situation

Grain and Soybeans

Supplies. Production estimates for the 2000/2001 U.S. corn, sorghum, barley, oats, wheat, rye, and soybean crops total 15.9 billion bushels. This brings total grain (excluding rice) and soybean production crops up 3 percent from 1999/2000 and 6 percent above the previous 5-year average. With beginning stocks for 2000/2001 at approximately 3.3 billion bushels and imports projected at approximately 233 million bushels, the available total supplies are estimated at 19.34 billion bushels. Current projections place 2000/2001 ending stocks at 3.3 billion bushels, up slightly from the previous year.

Of the four major producing regions, which include, the Eastern Corn Belt, Western Corn Belt, Central Plains, and Northern Plains, grain and soybean production was up in every region except the Central Plains (figure 1, table 1). Production in the Eastern Corn Belt, Western Corn Belt, and Northern Plains, combined, increased by 26 percent, or 676 million bushels (8, 4, and 14 percent or 347, 146, and 183 million bushels, respectively). Of all the regions, the Northeast has the largest estimated percentage increase from 1999/2000, with 50 percent (136 million bushels). However, this increase is only 21 percent above the 5-year average (1995-1999) for the region. In the Southeast, Kentucky led the region's 24-percent increase from last year with 231 billion bushels.

Of the Nation's total production, the Eastern and Western Corn Belts account for 58 percent (31 and 27 percent, respectively) for 2000/2001. In the Northern Plains, grain and soybean production is estimated at 1,521 million bushels, 14 percent above the previous year and 10 percent above the 5-year average. Grain and soybean production for the Pacific Northwest (PNW) has the third largest percentage increase, 18 percent. This is a 70 million bushel increase from last year, with Washington leading the region with 46 million more bushels than it produced last year, a 27 percent increase. Of the two regions (Southern Plains and Central Plains) that showed a production decrease, the Central Plains represents the largest reduction from 1999/2000 (413 million bushels), followed by the Southern Plains with 129 million bushels.

Use. U.S. grain and soybean use is projected at approximately 16.0 billion bushels, up 230 million bushels from 1999/2000. In addition, exports have risen 79 million bushels since the last marketing year from 4.29 billion bushels to 4.37 billion bushels.

December 1 Stocks and Storage. Grain (excluding rice) and soybean stocks, as of December 1, 2000, were reported at 13.2 billion bushels in all positions, up approximately 376 million bushels, or 3 percent, from 1999 but up 14 percent from the 5-year average (table 2). This is the highest level of December 1 stocks since 1987 when December 1 stocks for corn, wheat, and soybeans totaled 14.0 billion bushels. On-farm stocks accounted for 58 percent of the total and were reported at 7.66 million bushels, up 5 percent from 1999 and 13 percent above the 5-year average. December 1 off-farm stocks were reported at 5.53 billion bushels, down slightly (16 million bushels) from the previous year.

December 1 stocks were up in three of the four major producing regions, the Eastern and Western Corn Belts and Northern Plains. They accounted for a combined 70 percent (31, 30, and 9 percent, respectively) of the U.S. grain and soybean stocks. Iowa led the Western Corn Belt and all other States with 2,186 million bushels, followed by Illinois (Eastern Corn Belt) with 2,004 million bushels and Minnesota (Western Corn Belt) with 1.40 billion bushels. Of the regions that increased from the previous year, the Northeast and Southeast regions were up by 27 and 20 percent, respectively, accounting for an increase of approximately 86 million bushels combined.

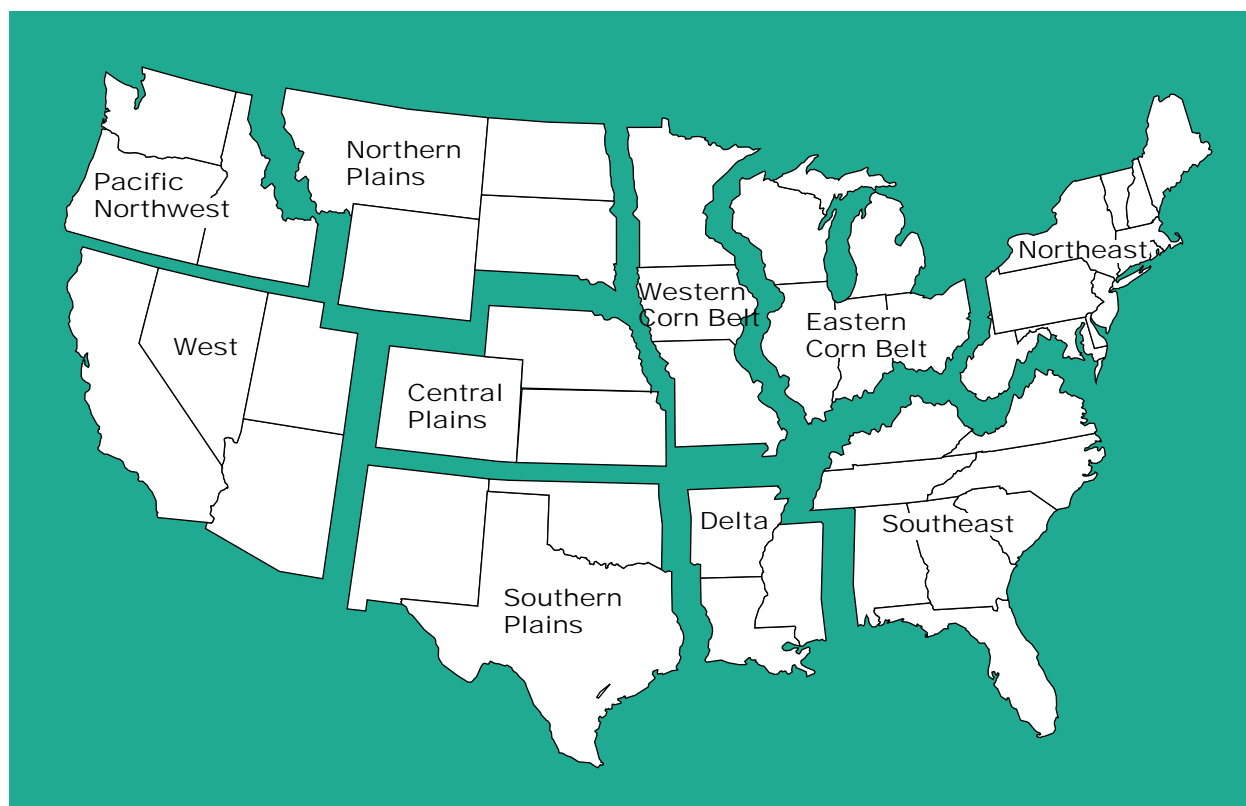
Although the Central Plains accounts for 16 percent of the total December 1 U.S. grain and soybean stocks, the region's total on- and off-farm stocks were down 8 percent (181 million bushels) from the previous year but up 11 percent from the 5-year average. Of the on-farm stocks, the Northeast region had a significant increase from the previous year of 77 percent (43 million bushels in Pennsylvania alone). In addition, Texas leads the Southern Plains' 23-percent decline in off-farm stocks with a decrease of over 84 million bushels from the previous year. This is due to a drought during the 2000 crop season.

The U.S. grain storage capacity (on- and off-farm) increased by 2 percent from the previous year, with a total of 19.7 billion bushels as of December 1, 2000 (table 3). This is the highest amount of total capacity since 1994 (19.9 billion bushels). The capacity of off-farm commercial grain storage totaled 8.3 billion bushels, up 3 percent from the previous year, on December 1, 1999.

Corn

U.S. corn production for 2000/2001 is estimated at 9.97 billion bushels, with 79.6 million acres planted and

Figure 1—U.S. grain production regions



Source: USDA-AMS

Table 1—U.S. grain¹ and soybean production, 1995/96-2000/01

Region	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/01	Percent of 1999/2000	Percent of 5-yr. avg.
	<i>Million bushels</i>							
Northeast	326	394	341	361	275	411	150	121
Southeast	642	770	703	584	565	702	124	108
Delta	290	475	403	338	353	361	102	97
Eastern Corn Belt	3,804	4,034	4,493	4,605	4,530	4,877	108	114
Western Corn Belt	3,304	3,981	3,934	4,260	4,097	4,243	104	108
Southern Plains	597	649	828	717	804	675	84	94
Central Plains	2,078	2,767	2,898	3,087	2,945	2,532	86	92
Northern Plains	1,154	1,522	1,325	1,550	1,338	1,521	114	110
Pacific Northwest	441	497	478	459	390	460	118	102
West	110	150	143	139	120	120	100	91
Other States ²	n/a	n/a	n/a	n/a	n/a	4	0	n/a
United States	12,746	15,240	15,546	16,097	15,416	15,907	103	106

¹ U.S. grains include corn, sorghum, barley, oats, wheat, rye.

² Rye production not allocated to individual States: Illinois, Kansas, Michigan, Minnesota, Nebraska, New York, North Carolina, Pennsylvania, South Carolina, Texas, and Wisconsin (rye).

Source: USDA-NASS

Table 2—U.S. grain and soybean stocks by position, December 1, 1994-2000

Region	1994			1995			1996		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>			<i>Million bushels</i>			<i>Million bushels</i>		
Northeast	105	75	180	73	74	147	88	77	99
Southeast	190	254	444	138	209	347	157	221	317
Delta	44	161	205	31	135	166	34	120	134
Eastern Corn Belt	2,400	1,634	4,034	1,882	1,272	3,153	2,040	1,135	3,158
Western Corn Belt	2,442	1,404	3,846	1,862	1,218	3,080	2,222	1,141	3,362
Southern Plains	28	262	290	31	214	245	18	168	178
Central Plains	944	850	1,794	649	728	1,376	957	715	1,669
Northern Plains	880	300	1,181	642	261	903	853	249	1,101
Pacific Northwest	81	167	248	68	187	254	79	200	269
West	10	39	48	5	36	41	9	37	25
Unallocated	256	41	297	206	55	261	225	43	475
United States	7,380	5,187	12,567	5,586	4,388	9,974	6,682	4,106	10,788

Region	1997			1998			1999		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>			<i>Million bushels</i>			<i>Million bushels</i>		
Northeast	68	74	142	65	78	143	56	88	144
Southeast	130	146	275	93	218	311	88	147	235
Delta	21	143	163	11	147	158	*	151	151
Eastern Corn Belt	2,202	1,370	3,573	2,335	1,573	3,908	2,251	1,706	3,957
Western Corn Belt	2,205	1,079	3,284	2,534	1,403	3,937	2,449	1,291	3,740
Southern Plains	46	387	433	15	373	387	16	454	469
Central Plains	1,017	1,071	2,088	1,075	962	2,037	1,111	1,163	2,274
Northern Plains	788	245	1,032	942	283	1,225	870	240	1,110
Pacific Northwest	90	208	298	84	209	293	88	211	300
West	5	42	46	2	56	59	1	46	46
Unallocated	220	72	292	357	68	425	340	49	389
United States	6,791	4,836	11,628	7,514	5,370	12,883	7,271	5,546	12,817

Region	2000			Percent of 1999			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>								
Northeast	100	84	183	177	95	127	142	107	136
Southeast	110	172	282	125	117	120	91	91	95
Delta	0	121	121	73	80	80	1	87	78
Eastern Corn Belt	2,402	1,730	4,132	107	101	104	112	123	116
Western Corn Belt	2,668	1,334	4,002	109	103	107	118	109	115
Southern Plains	15	350	365	97	77	78	61	110	107
Central Plains	979	1,114	2,093	88	96	92	102	120	111
Northern Plains	895	261	1,155	103	109	104	109	102	108
Pacific Northwest	89	214	303	100	101	101	108	105	107
West	2	40	41	271	87	90	43	92	95
Unallocated	403	111	514	119	224	132	149	193	140
United States	7,663	5,530	13,193	105	100	103	113	114	114

* Unallocated

Source: USDA-NASS

Table 3—U.S. Grain Storage Capacity, 1993-2000

Region	U.S. Grain Storage Capacity Dec. 1, 1993			U.S. Grain Storage Capacity Dec. 1, 1994			U.S. Grain Storage Capacity Dec. 1, 1995		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>1,000 bushels</i>			<i>1,000 bushels</i>			<i>1,000 bushels</i>		
Northeast	280,000	150,850	430,850	255,000	144,290	399,290	245,000	148,800	393,800
Southeast	575,000	361,160	936,160	565,000	350,220	915,220	535,000	347,800	882,800
Delta	185,000	378,800	563,800	185,000	373,970	558,970	170,000	370,000	540,000
Eastern Corn Belt	3,005,000	2,123,400	5,128,400	3,000,000	2,115,120	5,115,120	2,920,000	2,105,180	5,025,180
Western Corn Belt	3,425,000	1,718,290	5,143,290	3,340,000	1,721,730	5,061,730	3,290,000	1,713,160	5,003,160
Southern Plains	295,000	1,144,390	1,439,390	270,000	1,097,870	1,367,870	250,000	1,069,260	1,319,260
Central Plains	1,590,000	1,623,700	3,213,700	1,670,000	1,597,240	3,267,240	1,615,000	1,580,930	3,195,930
Northern Plains	1,670,000	442,170	2,112,170	1,640,000	450,510	2,090,510	1,590,000	443,330	2,033,330
Pacific Northwest	270,000	390,620	660,620	265,000	379,730	644,730	270,000	381,700	651,700
West	*	151,890	151,890	*	142,300	142,300	*	139,970	139,970
Unallocated	330,000	1,230	331,230	310,000	1,130	311,130	280,000	930	280,930
United States	11,625,000	8,486,500	20,111,500	11,500,000	8,374,110	19,874,110	11,165,000	8,301,060	19,466,060

Region	U.S. Grain Storage Capacity Dec. 1, 1996			U.S. Grain Storage Capacity Dec. 1, 1997			U.S. Grain Storage Capacity Dec. 1, 1998		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>1,000 bushels</i>			<i>1,000 bushels</i>			<i>1,000 bushels</i>		
Northeast	230,000	147,420	377,420	230,000	148,310	378,310	230,000	145,580	375,580
Southeast	520,000	344,700	864,700	505,000	336,350	841,350	495,000	329,310	824,310
Delta	170,000	360,810	530,810	170,000	362,130	532,130	180,000	369,350	549,350
Eastern Corn Belt	2,900,000	2,088,840	4,988,840	2,900,000	2,085,650	4,985,650	3,000,000	2,098,600	5,098,600
Western Corn Belt	3,190,000	1,700,690	4,890,690	3,200,000	1,695,470	4,895,470	3,200,000	1,732,760	4,932,760
Southern Plains	230,000	946,920	1,176,920	220,000	877,520	1,097,520	220,000	832,880	1,052,880
Central Plains	1,620,000	1,514,360	3,134,360	1,620,000	1,481,840	3,101,840	1,640,000	1,521,360	3,161,360
Northern Plains	1,590,000	443,360	2,033,360	1,570,000	444,890	2,014,890	1,620,000	449,980	2,069,980
Pacific Northwest	250,000	385,700	635,700	245,000	388,040	633,040	245,000	385,450	630,450
West	*	138,600	138,600	*	140,210	140,210	*	137,000	137,000
Unallocated	270,000	930	270,930	290,000	930	290,930	290,000	920	290,920
United States	10,970,000	8,072,330	19,042,330	10,950,000	7,961,340	18,911,340	11,130,000	8,003,190	19,133,190

Region	U.S. Grain Storage Capacity Dec. 1, 1999			U.S. Grain Storage Capacity Dec. 1, 2000			Percent of 1999		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>1,000 bushels</i>			<i>1,000 bushels</i>			<i>1,000 bushels</i>		
Northeast	230,000	147,720	377,720	230,000	146,650	376,650	100	99	100
Southeast	500,000	321,990	821,990	490,000	318,134	808,134	98	99	98
Delta	200,000	383,990	583,990	195,000	385,940	580,940	98	101	99
Eastern Corn Belt	2,970,000	2,134,640	5,104,640	3,025,000	2,204,156	5,229,156	102	103	102
Western Corn Belt	3,220,000	1,722,860	4,942,860	3,295,000	1,742,470	5,037,470	102	101	102
Southern Plains	220,000	829,460	1,049,460	240,000	854,960	1,094,960	109	103	104
Central Plains	1,625,000	1,557,040	3,182,040	1,605,000	1,693,571	3,298,571	99	109	104
Northern Plains	1,630,000	464,210	2,094,210	1,635,000	460,360	2,095,360	100	99	100
Pacific Northwest	245,000	380,940	625,940	245,000	379,335	624,335	100	100	100
West	*	146,550	146,550	*	156,500	156,500	*	107	107
Unallocated	320,000	920	320,920	350,000	924	350,924	109	100	109
United States	11,160,000	8,090,320	19,250,320	11,310,000	8,343,000	19,653,000	101	103	102

* Unallocated

Source: USDA-NASS

72.7 million acres harvested. The yield per harvested acre is projected at 137.1 bushels. The total corn use is projected at 9.81 billion bushels. The January 11 Grain Stocks report puts December 1 corn stocks in all positions at 8.52 billion bushels, up 6 percent from December 1, 1999 and the highest level since 1987. Of the total stocks, 5.55 billion bushels were stored on farms, up 7 percent; and 2.97 billion bushels were stored off farms, up 4 percent from the previous year.

Supplies. The January 11 Crop Production report estimated an increase in 2000/2001 corn production for all major producing areas except the Central Plains (table 4). The Eastern and Western Corn Belts, which represent 67 percent of total production, are estimated at an 8- and 3-percent (273 and 97 million bushels) increase in their production, respectively, compared to 1999/2000. In the Eastern Corn Belt, production was up in Illinois, Indiana, and Ohio by 12, 9, and 20 percent, respectively, compared to the previous year. Production was down in Michigan and Wisconsin by 4 and 11 percent, respectively. Production in Missouri, a smaller producing State in the Western Corn Belt compared to Iowa and Minnesota, was up 60 percent compared to last year, while production was down in Iowa and Minnesota by 1 and 3 percent, respectively, compared to the same period last year. Production in the Northeast, Southeast, Delta, and Northern Plains is forecast up 115, 84, 15, and 94 million bushels (67, 26, 17, and 21 percent), respectively, from 2000/2001. While the forecast shows a 22-, 10-, and 34-percent increase, respectively, above the 5-year average for the Northeast, Southeast, and Northern Plains regions, there is a 2-percent decrease from the 5-year average

production for the Delta region. Pennsylvania, the largest producer in the Northeast, experienced a 123-percent increase in production compared to the previous year. Kentucky, the largest producer in the Southeast, experienced a 29-percent increase in production over last year as well. In the Northern Plains, North and South Dakota, the two largest producers, experienced a 17- and 36-percent increase, respectively, in their production compared to the previous year. Although, the Delta is a small producing region, Arkansas, Louisiana, and Mississippi experienced a gain of 75, 8, and 6 percent, respectively, over last year's production. In addition, the production in the Central Plains is estimated down 153 million bushels, or 9 percent, compared to 2000/2001 and 2 percent below the 5-year average.

Use. Total corn use is projected for 2000/2001 at 9.81 billion bushels, up 290 million bushels, or 3 percent, from last year. Domestic use is projected at 7.76 billion bushels, down 177 million bushels, or 2 percent, from the previous year. Export corn use for the current marketing year is projected at 2.05 billion bushels, up 113 million bushels, or 6 percent, from 1999/2000 projections. The average farm price for corn is forecast between \$1.70 and \$1.90 per bushel for 2000/2001.

Stocks and Storage. The January 11 *Grain Stocks* report puts December 1 corn stocks in all positions at 8.52 billion bushels, up 6 percent from December 1, 1999, the highest level since 1987, and 17 percent above the 5-year average (table 5). Of the total stocks, 5.55 billion bushels were stored on farms, up 7 percent from the previous year and 15 percent above the 5-year

Table 4—U.S. corn production, 1995/96-2000/01

Region	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/01	Percent of 1999/2000	Percent of 5-yr. avg.
	<i>Million bushels</i>							
Northeast	228	295	232	254	172	287	167	122
Southeast	370	461	395	324	330	414	126	110
Delta	59	155	118	108	89	104	117	98
Eastern Corn Belt	2,701	2,994	3,260	3,336	3,304	3,577	108	115
Western Corn Belt	2,309	2,920	2,793	3,087	2,996	3,093	103	110
Southern Plains	245	238	280	228	284	285	100	112
Central Plains	1,191	1,663	1,650	1,814	1,733	1,580	91	98
Northern Plains	241	428	394	528	452	546	121	134
Pacific Northwest	28	34	30	33	32	33	103	105
West	30	45	55	48	40	49	123	114
United States	7,400	9,233	9,207	9,759	9,431	9,968	106	111

Source: USDA-NASS

average. On-farm stocks represent 65 percent of the total stocks, whereas 2.97 billion bushels were stored off farms, up 4 percent from the previous year and 21 percent above the 5-year average. Off-farm stocks accounted for 35 percent of the total stocks.

December 1 stocks were reported up for 2000 in all regions except the Southern Plains, Central Plains, PNW, and West. December 1 stocks were up 164, 222, 64, 53, and 41 million bushels in the Eastern Corn Belt, Western Corn Belt, Northern Plains, Northeast, and Southeast, respectively. The numbers represent year-to-year increases in corn stocks of 6, 8, 17, 63, and 26 percent, respectively, for the Eastern Corn Belt, Western Corn Belt, Northern Plains, Northeast, and Southeast. December 1 stocks for these regions were, respectively, 17, 22, 39, 38, and 30 percent above their 5-year average.

A combined 71 percent of the total stocks were kept in the Eastern and Western Corn Belts. Sixty-two percent of the Eastern Corn Belt stocks were kept on farms while 38 percent of the stocks were kept on off-farm facilities. The Western Corn Belt, which accounted for 35 percent of the total U.S. stocks, kept 70 percent of its stocks on farms, while the remainder were kept off farms. December 1 stocks were down in the Southern Plains, Central Plains, PNW, and West. In the Southern Plains, the stocks were down 16 million bushels, or 13 percent below the previous year's level. Central Plains stocks were down 87 million bushels, or 6 percent below 1999. The stocks were down 3 (16 percent) and 2 million bushels (15 percent), respectively, in the PNW and West compared to the year before.

Soybeans

Soybean production for this year is estimated at 2.77 billion bushels, with 74.5 million acres planted and 72.7 million acres harvested (38.1 bushels per harvested acre). The average price received by farmers is projected at between \$4.50 and \$4.80 per bushel. December 1 soybean stocks in all positions were reported in the January 11 *Grain Stocks* report at 2.24 billion bushels, up 3 percent from December 1, 1999. While the on-farm stocks, estimated at 1.22 billion bushels, were up 6 percent, off-farm stocks, estimated at 1.02 billion bushels, were down 1 percent compared to the previous year.

Supplies. U.S. soybean production for 2000/2001 is estimated at 2.77 billion bushels, up 116 million bushels, or 4 percent, above this period last year (table 6). Soybean production is estimated up in every region

except the Delta, Southern Plains, and Central Plains. The Eastern Corn Belt is estimated to have the largest increase in production in 2000/2001, with 79 million bushels. Eastern Corn Belt production is estimated up 79 million bushels, 8 percent above the previous year's production and 13 percent above the 5-year average for the region. The three largest producers, Illinois, Indiana, and Ohio, experienced a 4-, 20-, and 15-percent gain, respectively, in production compared to last year. Production was down in Michigan and Wisconsin by 4 and 3 percent, respectively. Production is estimated up 12 million bushels in the Western Corn Belt, 1 percent above the previous year's production and 7 percent above the 5-year average. While production was down by 4 percent in Iowa, it was up by 1 and 19 percent, respectively, in Minnesota and Missouri. Soybean production in the Northeast and Southeast is estimated to increase by 51 and 49 percent (19 and 52 million bushels), respectively, above the previous year's levels and 49 and 9 percent, respectively, above the 5-year average for the region. All producing States in the Northeast except New York experienced a gain in their production. Similarly, all the States in the Southeast except Alabama and Florida experienced a gain in production compared to last year. Kentucky and North Carolina were the two largest producers in the Southeast region. Soybean production is estimated up in the Northern Plains by 21 million bushels. This is 11 percent above last year's production and 47 percent above the 5-year average for the region. Production was up in North and South Dakota by 30 and 4 percent, respectively. Production is forecast down 23, 5, and 38 million bushels (14, 32, and 15 percent), respectively, in the Delta and Southern and Central Plains compared to last year.

Use. Total soybean use is projected for 2000/2001 at 2.72 billion bushels. The 2000/2001 domestic crush is projected at 1.59 billion bushels, just slightly above the previous year's crush of 1.58 billion bushels. Soybean exports are projected at 9.60 billion bushels, slightly lower than this time last year, at 9.73 billion bushels. Seed and residual use is projected at 91 and 77 million bushels, respectively. In addition, the average farm price for soybeans is projected between \$4.50 to \$4.80 per bushel, compared to \$4.63 per bushel last year.

Stocks and Storage. The January 11 *Grain Stocks* report puts December 1 soybean stocks in all positions at 2,239 million bushels, up 3 percent from December 1, 1999, and 12 percent above the 5-year average (table 7). On-farm stocks estimated at 1.22 billion bushels were up 6 percent from the previous year and 17 percent above the 5-year average. Off-farm stocks, esti-

Table 5—U.S. corn stocks by position, December 1, 1994-2000

Region	1994			1995			1996		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>			<i>Million bushels</i>			<i>Million bushels</i>		
Northeast	95	33	128	65	35	100	81	46	127
Southeast	110	76	186	85	65	150	95	66	161
Delta	*	16	16	*	17	17	*	15	15
Eastern Corn Belt	1,980	1,100	3,080	1,500	801	2,301	1,630	749	2,379
Western Corn Belt	1,935	783	2,718	1,409	668	2,077	1,700	600	2,300
Southern Plains	18	108	126	23	96	119	10	94	104
Central Plains	815	459	1,274	546	394	940	850	459	1,309
Northern Plains	270	56	326	172	37	209	264	49	313
Pacific Northwest	*	10	10	*	13	13	*	10	10
West	*	12	12	*	11	11	*	13	13
Unallocated	195	9	204	160	8	168	170	3	173
United States	5,418	2,663	8,080	3,960	2,146	6,106	4,800	2,103	6,903

Region	1997			1998			1999		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>			<i>Million bushels</i>			<i>Million bushels</i>		
Northeast	60	31	91	60	38	98	52	33	85
Southeast	76	66	142	87	65	152	87	70	157
Delta	*	29	29	*	35	35	*	31	31
Eastern Corn Belt	1,775	912	2,687	1,835	1,034	2,869	1,775	1,129	2,904
Western Corn Belt	1,680	658	2,338	1,930	810	2,740	1,920	829	2,749
Southern Plains	25	124	149	*	122	122	*	119	119
Central Plains	803	508	1,311	910	524	1,434	873	533	1,406
Northern Plains	245	61	306	318	64	382	313	66	379
Pacific Northwest	*	12	12	*	12	12	*	15	15
West	*	14	14	*	16	16	*	14	14
Unallocated	158	9	167	180	11	191	175	6	181
United States	4,822	2,425	7,247	5,320	2,732	8,052	5,195	2,844	8,039

Region	2000			Percent of 1999			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>								
Northeast	94	44	138	181	135	163	148	121	138
Southeast	109	89	198	125	128	126	127	135	130
Delta	*	36	36	*	113	113	*	139	139
Eastern Corn Belt	1,905	1,163	3,068	107	103	106	112	126	117
Western Corn Belt	2,085	886	2,971	109	107	108	121	124	122
Southern Plains	*	103	103	inda	87	87	*	93	84
Central Plains	795	524	1,319	91	98	94	100	108	103
Northern Plains	357	86	443	114	131	117	136	155	139
Pacific Northwest	*	12	12	*	84	84	*	99	99
West	*	12	12	*	85	85	*	89	89
Unallocated	205	12	217	117	209	120	122	160	123
United States	5,550	2,968	8,518	107	104	106	115	121	117

* Unallocated

Source: USDA-NASS

Table 6—U.S. soybean production, 1995/96-2000/01

Region	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/01	Percent of 1999/2000	Percent of 5-yr. avg.
	<i>Million bushels</i>							
Northeast	29	41	40	44	38	57	151	149
Southeast	139	170	163	143	105	157	149	109
Delta	152	202	213	155	164	141	86	79
Eastern Corn Belt	822	839	965	1,014	959	1,038	108	113
Western Corn Belt	775	790	908	952	915	927	101	107
Southern Plains	12	14	21	12	17	12	68	77
Central Plains	152	209	231	240	262	224	85	102
Northern Plains	94	115	147	180	193	214	111	147
United States	2,174	2,380	2,689	2,741	2,654	2,770	104	110

Source: USDA-NASS

mated at 1,022 million bushels, were down 1 percent compared to the same period last year and 5 percent above the 5-year average. December 1 stocks were up in the Eastern Corn Belt, Western Corn Belt, Northern Plains, and Southeast. The stocks were up in the Eastern Corn Belt by 13 million bushels, or 1 percent, compared to last year and 11 percent above the 5-year average. In the Western Corn Belt, the stocks were up 18 million bushels, or 2 percent, compared to the previous year and 11 percent above the 5-year average. Soybean stocks were up 14 and 6 million bushels (14 and 15 percent), respectively, in the Northern Plains and Southeast. While the stocks in the Northern Plains represent an increase of 42 percent above the 5-year average, the stocks in the Southeast represent a decrease of 46 percent compared to the 5-year average. Thirty-seven percent of the total soybean stocks were kept in the Eastern Corn Belt, while 36 percent of the stocks were kept in the Western Corn Belt. The Eastern Corn Belt kept 57 percent of its stocks on farms, while the remaining 43 percent were kept off farms. Fifty-nine percent of Western Corn Belt stocks were kept on farms, while 41 percent were kept off farms. Soybean stocks were down 18 and 16 million bushels (9 and 19 percent), respectively, in the Central Plains and Delta regions. While the Central Plains stocks were 10 percent above the 5-year average, the Delta stocks were 29 percent below the 5-year average.

Wheat

U.S. production of all wheat is estimated at 2.22 billion bushels, down 76 million, or 3 percent, from the previous year and 6 percent below the 5-year average (table 8). Domestic use is projected at 1.33 billion bushels, up 29 million bushels from the previous year. While

imports remain the same at 95 million bushels, exports climbed slightly to 1.10 billion bushels, up 10 million bushels compared to the same time last year. Total wheat use is projected at 2.43 billion bushels. The January 11 Grain Stocks report puts wheat stored in all positions on December 1, 2000, at 1.80 billion bushels, down 4 percent from a year ago. On-farm stocks, estimated at 623 million bushels, were down 4 percent from the previous year, while the off-farm stocks, estimated at 1.18 billion bushels, were down 5 percent from a year ago.

For the marketing year 2000/2001, production of hard red winter (HRW) is estimated at 844 million bushels, down 207 million bushels, or 20 percent, from 1999/2000. Production of hard red spring (HRS) is estimated at 498 million bushels, up 50 million bushels, or 11 percent, from the previous year's level. Soft red winter (SRW) production is estimated at 471 million bushels, up 17 million bushels, 4 percent above 1999/2000. Production of durum and white wheat is estimated at 110 and 301 million bushels, respectively, for 2000/2001. While the estimate is up 54 million bushels (22 percent) for white wheat, it is up 11 million bushels (11 percent) for durum compared to 1999/2000.

Supplies. Wheat production is estimated up in the Northern Plains, PNW, Western Corn Belt, and Delta and up slightly in the Northeast and Southeast regions. Production in the Northern Plains is estimated up 44 million bushels, or 8 percent, from 1999/2000 but 5 percent below the 5-year average. North Dakota experienced a 30-percent increase over last year.

The PNW is estimated to experience an increase of 61 million bushels in production, or 23 percent. Production

Table 7—U.S. soybean stocks by position, December 1, 1994-2000

Region	1994			1995			1996		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>			<i>Million bushels</i>			<i>Million bushels</i>		
Northeast	*	15	15	*	11	11	*	15	15
Southeast	63	69	132	46	60	105	49	64	112
Delta	24	113	137	14	90	104	21	83	104
Eastern Corn Belt	390	381	770	356	332	688	382	299	681
Western Corn Belt	373	366	739	345	335	680	357	289	646
Southern Plains	*	6	6	*	7	7	*	2	2
Central Plains	58	124	182	47	101	148	56	104	160
Northern Plains	50	30	79	38	27	65	44	22	65
Pacific Northwest	*	*	*	*	*	*	*	*	*
West	*	*	*	*	*	*	*	*	*
Unallocated	29	12	41	18	9	27	27	13	40
United States	986	1,116	2,102	862	972	1,833	935	890	1,825

Region	1997			1998			1999		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>			<i>Million bushels</i>			<i>Million bushels</i>		
Northeast	*	14	14	*	4	4	*	14	14
Southeast	53	41	93	*	55	55	*	38	38
Delta	20	82	102	*	73	73	*	82	82
Eastern Corn Belt	394	327	721	472	351	823	447	369	816
Western Corn Belt	429	311	740	472	349	821	456	343	799
Southern Plains	*	8	8	*	5	5	*	9	9
Central Plains	65	113	177	77	103	180	80	130	210
Northern Plains	65	31	96	61	30	91	70	35	105
Pacific Northwest	*	*	*	*	1	1	*	*	*
West	*	*	*	*	*	*	*	*	*
Unallocated	23	27	50	105	29	134	97	12	109
United States	1,048	951	1,999	1,187	999	2,186	1,150	1,033	2,183

Region	2000			Percent of 1999			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>								
Northeast	*	3	3	*	23	23	*	29	29
Southeast	*	44	44	*	115	115	*	85	54
Delta	*	66	66	*	81	81	*	81	71
Eastern Corn Belt	469	360	829	105	97	101	114	107	111
Western Corn Belt	479	338	817	105	98	102	116	104	111
Southern Plains	*	4	4	*	42	42	*	62	62
Central Plains	67	125	192	84	96	91	103	114	110
Northern Plains	77	42	119	110	121	114	139	146	142
Pacific Northwest	*	*	*	*	*	*	*	*	*
West	*	*	*	*	*	*	*	*	*
Unallocated	125	41	166	129	347	152	232	225	230
United States	1,217	1,022	2,239	106	99	103	117	105	112

* Unallocated

Source: USDA-NASS

Table 8—U.S. wheat production, 1995/96-2000/01

Region	1995/96	1996/97	1997/98	1998/99	1999/2000	2000/01	Percent of 1999/2000	Percent of 5-yr. avg.
	<i>Million bushels</i>							
Northeast	38	34	39	34	37	37	101	102
Southeast	110	117	125	101	110	110	101	98
Delta	56	84	51	57	65	82	127	131
Eastern Corn Belt	227	150	212	206	215	212	99	105
Western Corn Belt	121	157	137	139	125	147	118	108
Southern Plains	188	173	298	343	284	213	75	83
Central Plains	477	404	662	681	621	479	77	84
Northern Plains	595	715	556	604	524	568	108	95
Pacific Northwest	318	367	339	317	263	324	123	101
West	53	77	61	64	56	51	91	82
United States	2,183	2,277	2,481	2,547	2,299	2,223	97	94

Source: USDA-NASS

was up 4, 47, and 33 percent, respectively, in Idaho, Oregon, and Washington. Production is estimated up 22 million bushels in the Western Corn Belt. This is 18 percent above 1999/2000 and 8 percent above the 5-year average. While Iowa experienced a 37-percent decline in production, Minnesota and Missouri experienced a 22 and 12 percent increase, respectively.

Production is estimated down in the Central Plains, Southern Plains, West, and Eastern Corn Belt. Production in the Central Plains is estimated down 142 million bushels, or 23 percent, from 1999/2000 and 16 percent below the 5-year average. All of the producing States in the region experienced a decline in production. Production is expected to decline by 71 million bushels in the Southern Plains. This is 25 percent below 1999/2000 and 17 percent below the 5-year average. Production was reduced in all States in the Southern Plains. Production is estimated down 5 and 3 million bushels, respectively, in the West and Eastern Corn Belt. The figures represent 9 and 1 percent, respectively, below 1999/2000. While production is 18 percent below the 5-year average for the West, it is 5 percent above the 5-year average for the Eastern Corn Belt. Arizona and Nevada experienced a 5- and 7-percent increase, respectively, in production. In the Eastern Corn Belt, Ohio, Indiana, and Wisconsin experienced an 11-, 5-, and 17-percent increase in production, respectively.

Use. Total wheat use for 2000/2001 is projected at 2.43 billion bushels, up 39 million bushels, or 2 percent, from 1999/2000. Domestic use is projected at 1.33 billion bushels, up 29 million bushels, 2 percent above

1999/2000. Exports are projected at 1,100 million bushels, up 10 million bushels, or 1 percent, from the previous year. Feed and residual use is projected at 300 million bushels, while domestic food use is projected at 945 million bushels. While feed and residual use is up 6 percent, domestic food use is up by 2 percent from last year's levels. HRW use is projected at 932 million bushels, down 96 million bushels, or 9 percent, from 2000/2001 estimates. HRS is projected to increase to 557 million bushels, an increase of 34 million bushels, or 7 percent above last year. SRW use is projected at 472 million bushels, representing an increase of 15 million bushels, or 3 percent above last year. Durum and white wheat total use are projected at 151 and 316 million bushels, respectively. These represent increases of 18 million bushels (14 percent) and 67 million bushels (27 percent), respectively, compared to 1999/2000.

Stocks and Storage. The January 11 *Grain Stocks* report puts wheat stored in all positions on December 1, 2000, at 1.8 billion bushels, down 4 percent from a year ago but 13 percent above the 5-year average (table 9). On-farm stocks, estimated at 623 million bushels, were down 4 percent from the previous year but 4 percent above the 5-year average. Off-farm stocks, estimated at 1.18 billion bushels, were down 5 percent from a year ago and 19 percent above the 5-year average. Compared to the previous year, December stocks were down or relatively unchanged in all regions except the Western Corn Belt, where stocks rose by 16 million bushels, or 14 percent. Western Corn Belt stocks were 17 percent above the 5-year average. The Western Corn Belt kept 54 percent of its stocks on farms, while 46 percent were kept on off-farm loca-

Table 9—U.S. wheat stocks by position, December 1, 1994-2000

Region	1994			1995			1996		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>			<i>Million bushels</i>			<i>Million bushels</i>		
Northeast	*	21	21	*	24	24	*	15	15
Southeast	2	34	36	1	28	29	1	20	21
Delta	*	22	22	*	21	21	*	15	15
Eastern Corn Belt	7	120	127	6	114	120	6	59	65
Western Corn Belt	49	55	103	44	56	100	63	36	99
Southern Plains	10	145	155	7	107	114	8	72	79
Central Plains	64	255	319	51	227	278	45	142	187
Northern Plains	371	118	489	305	117	422	388	92	480
Pacific Northwest	52	126	178	47	142	189	57	157	214
West	2	16	18	1	18	19	2	16	18
Unallocated	14	9	23	15	8	23	15	9	24
United States	571	921	1,491	477	861	1,338	584	635	1,219

Region	1997			1998			1999		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>			<i>Million bushels</i>			<i>Million bushels</i>		
Northeast	*	27	27	*	31	31	*	37	37
Southeast	1	37	39	2	39	41	1	38	39
Delta	*	25	26	*	35	35	*	32	32
Eastern Corn Belt	12	105	116	15	157	172	17	182	198
Western Corn Belt	56	56	112	54	67	121	45	67	112
Southern Plains	10	164	173	15	243	258	11	234	244
Central Plains	76	277	353	86	328	414	89	341	430
Northern Plains	357	116	473	417	115	532	392	107	499
Pacific Northwest	67	165	232	61	159	220	66	163	229
West	1	22	23	2	33	35	1	26	27
Unallocated	24	23	46	29	9	38	26	11	37
United States	604	1,015	1,619	680	1,215	1,896	647	1,236	1,884

Region	2000			Percent of 1999			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>Million bushels</i>								
Northeast	*	33	33	*	89	89	*	123	123
Southeast	1	37	39	108	99	99	102	115	114
Delta	*	18	18	73	57	58	85	71	71
Eastern Corn Belt	16	182	198	98	100	100	146	148	148
Western Corn Belt	68	59	128	151	89	114	130	105	117
Southern Plains	9	198	207	87	85	85	94	121	119
Central Plains	65	330	395	73	97	92	94	125	119
Northern Plains	371	104	475	95	98	95	100	96	99
Pacific Northwest	65	165	230	98	101	100	109	105	106
West	2	23	25	271	89	94	138	102	104
Unallocated	26	28	53	98	252	144	118	232	159
United States	623	1,178	1,802	96	95	96	104	119	113

* Unallocated

Source: USDA-NASS

tions. However, the Eastern Corn Belt had 92 percent of its stocks in off-farm commercial grain storage, while only 8 percent were kept on farms. The largest reduction in stocks occurred in the traditionally wheat producing regions where a larger share of the stocks were normally kept. December stocks were down 37, 35, and 24 million bushels in the Southern Plains, Central Plains, and Northern Plains, respectively. These represent 15-, 8-, and 5-percent reductions compared to last year. However, both Southern and Central Plains stocks were each still 19 percent above the 5-year average. Northern Plains stocks were 1 percent below the 5-year average. A combined 60 percent of the Nation's wheat stocks were kept in the Plains regions with the Northern Plains accounting for 26 percent of the total stocks. The Central and Southern Plains accounted for 22 and 11 percent of the Nation's stocks, respectively. Seventy-eight percent of the Northern Plains stocks were kept on farms, while 22 percent were kept off farms. However, 84 percent of the Central Plains stocks were kept off farms, while 16 percent of the stocks were kept on farms. The Southern Plains kept 96 per-

cent of its stocks on off-farm facilities, while only 4 percent were kept on farms.

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Transportation Situation

Ocean Freight

The first quarter ocean freight rates are generally higher than the previous year's last quarter. The year 2001 might end up being an exception. Although January's average rates from two key grain routes, U.S. Gulf (Gulf) to Japan and Pacific Northwest (PNW) to Japan, were higher than December rates, the lower ocean freight rates in February have caused rates for the first quarter of 2001, so far, to be lower than the fourth quarter of last year. Fourth quarter 2000 ocean freight rates from Gulf and PNW were higher than in the fourth quarter of 1999 but slightly lower than in the third quarter of 2000. This is due to two sharp drops in the Baltic Panamax Index (BPI) in mid- and late-December. The ocean rates' downward trend, that started in October and continued through December, made

it possible for grain exporters to experience a decrease in their cost of ocean transportation. The volatility in crude oil prices is mainly to blame for last year's higher than average ocean freight rates. In spite of the fall in ocean freight rates in the latter part of 2000, it was one of the most expensive years to export grain.

In the fourth quarter of 2000, the average ocean freight rates to Japan from the Gulf and PNW were \$23.56 and \$16.11 per metric ton (mt), respectively. These rates were \$2.74 and \$2.36 per mt more than the 5-year averages. The average daily ocean grain freight rates to Japan (from the Gulf and PNW) for 2000, with the exception of shipments from the Gulf in the first quarter, exceeded the 5-, 10-, and 15-year average rates (table 10).

Table 10 - Average daily ocean grain freight rates to Japan by quarter

Export range Year	1st quarter (Jan.-Mar.)	2d quarter (Apr.-June)	3d quarter (July-Sept.)	4th quarter (Oct.-Dec.)	Annual (Jan.-Dec.)
	\$ /metric ton				
Gulf***					
1998	18.95	16.85	13.41	13.65	15.71
1999	15.18	16.91	19.04	21.81	18.24
2000	21.47	22.99	23.96	23.56	23.34
2001*	21.86	n/a	n/a	n/a	n/a
5-year average	21.36	20.73	19.95	20.82	20.71
10-year average	23.45	23.43	22.56	23.42	23.40
15-year average	22.51	21.95	20.93	22.54	21.97
Pacific Northwest**					
1998	11.08	11.31	10.41	12.20	11.25
1999	9.74	10.88	11.10	13.92	11.41
2000	15.38	15.79	16.03	16.11	15.81
2001*	16.93	n/a	n/a	n/a	n/a
5-year average	13.17	12.85	12.22	13.75	13.00
10-year average	13.81	13.64	13.17	14.12	13.68
15-year average	13.51	12.92	12.26	13.50	13.05
Spread ¹					
1998	7.87	5.54	3.00	1.45	4.47
1999	5.44	6.03	7.94	7.89	6.83
2000	6.09	7.20	7.93	7.45	7.53
2001*	4.93	n/a	n/a	n/a	n/a
5-year average	8.20	7.88	7.72	7.07	7.71
10-year average	9.63	9.79	9.39	9.30	9.52
15-year average	8.99	9.03	8.67	9.04	8.93

Note: 1Gulf minus PNW

*Values are based on average daily rates from January 1 through February 16, 2001.

***Route 2

**Route 3

****The rates for 2000 are included.

Source: Baltic Exchange

The year 2000 was one of the best years in shipyard performance. More vessels were built and operated last year than in an average year. If not for the higher oil prices, the existence of additional vessels could have been expected to reduce the ocean rates. The year 2000 started with higher oil prices, which increased the cost of all modes of transportation including ocean vessels. The higher ocean freight rates that started the second quarter of 1999 continued its positive trend through the third quarter of 2000, affecting U.S. grain export prices.

The “spread”¹ between Gulf and PNW ocean rates increased for the year 2000 but has fallen during the first quarter of 2001 (figure 2). The low spread rates of January and February, so far, have caused the first quarter spread rates to fall below the 5-, 10-, and 15-year averages. This causes shipments from the Gulf to be more favorable.

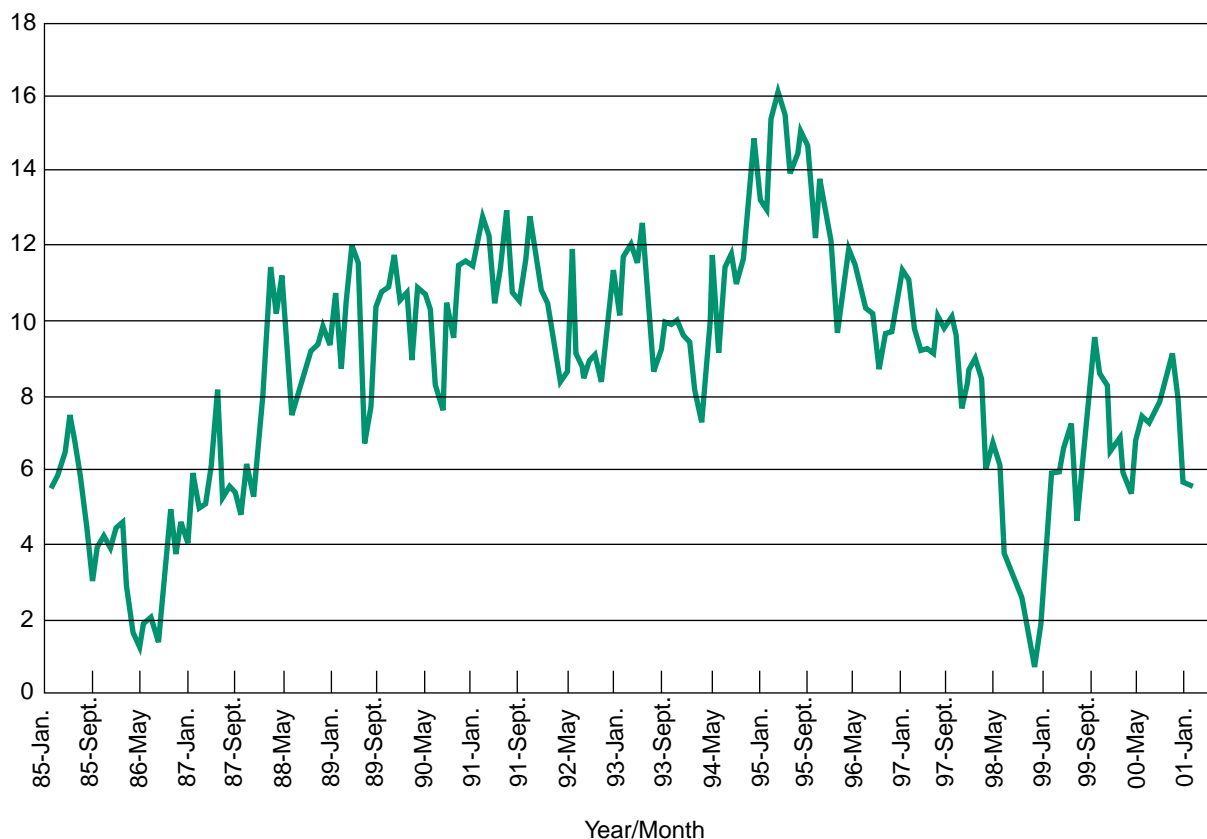
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¹The difference between the Gulf and PNW ocean freight rates is called “spread” rates.

Barge Situation

Harsh winter weather and repair work have disrupted grain barge traffic on the Mississippi and Illinois Rivers. In a normal winter, many of the Mississippi River locks are closed to navigation during January and February. This year, persistent freezing temperatures at some of the open lock sites caused ice accumulations that temporarily limited the maximum size of barge tows. Mississippi River Lock 19, Keokuk, IA, was closed during January and February for scheduled repairs. As of December 29, 2000, the main 1,200-foot chamber at Melvin Price (MP) Locks and Dam (Alton, IL) was closed to repair a failed miter gate. As a result of the closure, all MP traffic must use the smaller 600-foot auxiliary chamber. Barge movements have experienced extensive delays at MP and may expect continued delays throughout the lengthy repair process. Repairs are expected to be completed by March 28, 2001. Although the Illinois River is usually open to traffic during the winter months, there have been reports of ice-clogged conditions on that river. During periods of above-freezing temperatures, ice is flushed down the Illinois and into the Mississippi River.

Figure 2—Ocean freight “spread” rates to Japan (\$/metric ton)



Source: Baltic Exchange

During the first 2 weeks of 2001, an average 2.1 million bushels (59,800 tons) per week were moved through LaGrange, the last lock on the Illinois River at Versailles, IL. Typically during January, LaGrange moves 15.8 million bushels (446,465 tons) per week. As of mid-January 2001, grain traffic at Lock and Dam (L&D) 27 has decreased to 6.8 million bushels (192,842 tons) per week, considerably less than L&D 27's January weekly average of 17.1 million bushels (484,768).

Increases in barged grain during January 2001 were reported on the Ohio River, where 9.4 million bushels (273,806 tons) per week were reported at L&D 52 (Brookport, IL), which is the second to the last lock on the Ohio River. The average weekly volume at L&D 52 is usually 6.5 million bushels (189,840) per week.

Barge grain movements for the fourth quarter in 2000 were 34,552 bushels per week, 13 percent lower than during an average fourth quarter (table 11). Grain barge shipments are monitored by the U.S. Department of Agriculture (USDA) from weekly lock reports provided by the U.S. Army Corps of Engineers. The collective data from Mississippi River L&D 27, Ohio River L&D 52, and Norrell L&D on the Arkansas River are considered to be the total volume of barged grain since each lock is the last or second to the last one in its respective river.

Generally, barge grain shipments gradually increase throughout the year with a significant surge in volume during the fourth quarter. However, the lower than average fourth quarter barge volumes are consistent with the February 2001 U.S. corn export forecast, which was reduced 2.54 million tons from the previous month to 52.07 million tons (down 100 million bushels

to 2.05 billion bushels on a September/August marketing year). Increased competition from Argentina and China explains most of the decline.

Barge freight rates for grain shipped from Minneapolis-St. Paul to New Orleans for the fourth quarter average 202 percent of tariff (table 12). Barge rates are quoted in terms of differentials from barge tariff benchmarks.² The tariff rate from Minneapolis-St. Paul to New Orleans is \$6.19 per ton; therefore, the spot market rate quoted is 2.02 times \$6.19, or \$12.50 per ton. Lower Minneapolis-St. Paul rates are expected with the lower demand for barge services. The rates dropped 25 percent as compared to last year's fourth quarter and were 30 percent lower than the 5-year average. Barge freight rates for grain shipped from St. Louis to New Orleans for the fourth quarter averaged 161 percent of tariff, not significantly different from last year or the 5-year average.

While icy conditions on the Mississippi and Illinois Rivers have slowed traffic, there has been an increased demand for Ohio River grain. In January 2001, barge rates for the lower Ohio River averaged 174 percent of tariff, a 12-percent increase over January 2000. There has also been a 19-percent increase in Illinois River barge rates as compared to last January.

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² The benchmarks are from the Bulk Grain and Grain Products Freight Tariff No. 7, which was issued by the Waterways Freight Bureau (WFB) of the Interstate Commerce Commission (ICC). In 1976, the U.S. Department of Justice entered into an agreement with the ICC and made Tariff No. 7 no longer applicable. Today, the WFB no longer exists, and the ICC has become the Surface Transportation Board of the U.S. Department of Transportation. However, the barge industry continues to use the benchmarks as rate units.

Table 11- Average weekly barge shipments by quarter, 1995-2000

Year	1st quarter (Jan.-Mar.)	2d quarter (Apr.-June)	3d quarter (July-Sept.)	4th quarter (Oct.-Dec.)	Annual (Jan.-Dec.)
	- 1,000 bushels -				
1995	32,097	29,858	40,706	44,462	36,781
1996	29,971	36,549	25,811	39,847	33,045
1997	26,383	27,612	28,138	39,864	30,499
1998	25,932	27,601	30,391	37,790	30,428
1999	29,074	38,105	36,497	36,372	35,012
2000	27,932	33,384	34,207*	34,552	32,519
5-yr. avg.	28,691	31,945	32,309	39,667	33,153

Note: All averages based on shipments through Mississippi L&D 27, Ohio L&D 52, and Norrell L&D on the Arkansas River.

*Revised since November 2000 report.

Source: U.S. Army Corps of Engineers

Table 12—Average weekly barge rates by quarter, 1995-2000

Region/year	1st quarter (Jan.-Mar.)	2d quarter (Apr.-June)	3d quarter (July-Sept.)	4th quarter (Oct.-Dec.)
<i>percent of tariff</i>				
Minneapolis-St. Paul to New Orleans:	Tariff = \$6.19 per ton			
1995	253	221	347	347
1996	no rates	180	151	236
1997	165	146	179	249
1998	164	166	241	325
1999	213	182	271	269
2000	210	177	248	202
5-yr. avg.	198	179	238	285
St. Louis to New Orleans:	Tariff = \$3.99 per ton			
1995	205	155	263	197
1996	180	99	106	148
1997	118	90	122	140
1998	93	106	199	189
1999	123	107	196	163
2000	145	110	201	161
5-yr. avg.	144	111	177	167

Source: USDA-AMS

Rail Situation

Nearing the end of a federally imposed 15-month moratorium on railroad mergers, Class I railroads are focusing their efforts on improving service and reliability, both top priorities for 2001. Some major railroads are entering into partnerships and alliances as a way of operating and providing service together instead of merging. Burlington Northern Santa Fe (BNSF) and Canadian National railroads, for example, have teamed up in an agreement to haul grain in Iowa, Illinois, and the PNW. Operating alliances and agreements provide shippers the benefit of single-line service with the goal of enhanced reliability and consistency. Also, at the top of the Class I agendas for early 2001 is continued participation in the Surface Transportation Board's (STB) development of new rail merger regulations which are scheduled to be issued by June 11, 2001. Most Class I railroads implemented fuel cost recovery surcharges beginning in the fourth quarter of 2000. The surcharges are being imposed to offset the rising cost of crude oil and will be adjusted to reflect the market price of oil.

U.S. rail grain demand during the fourth quarter of calendar year 2000 (October-December) was down by 13.6 percent (280,280 carloadings) from first quarter peak carloadings of 324,401. Total fourth quarter car-

loadings for all U.S. railroads were the lowest recorded for the same period over the past 5 years, or since 1996. The decrease in total fourth quarter carloadings resulted in decreased demand for rail transportation on both western and eastern U.S. railroads. The 195,902 fourth quarter carloadings for western railroads were down 6.7 percent from the third quarter and were 12.2 percent lower than in the first quarter. For eastern railroads, fourth quarter grain carloadings totaled 84,378, also the lowest for the same period over the last 5 years. This represents a 7.8-percent decrease from the third quarter's 91,468 carloadings. After loading 101,168 cars for the first quarter, eastern railroads' grain carloadings decreased 9 percent, 9.6 percent, and 16 percent, respectively, for the second, third, and fourth quarters.

Weak fourth quarter grain carloadings reflect the continuing trend of decreasing total grain carloadings over the past 5 years for U.S. railroads with the exception of 1999. Grain carloadings were down 3 straight years between 1996 and 1998. Carloadings in 1999 were up 7 percent over 1998. In 2000, however, the downward trend continued with a 7-percent reduction in total carloadings from 1999: 1,188,917 versus 1,278,480 carloadings. During the first 2 reporting weeks of calendar year 2001, grain carloadings were down by 10,017

cars: 41,936 versus 51,953, a 19.3-percent reduction from the first 2 weeks in 2000.

Western Railroads

Grain cars originated on western railroads for the year 2000 were down 8.9 percent (817,149 versus 897,261) compared to 1999 and were down 14.6 percent in the fourth quarter of 2000 compared to the fourth quarter of 1999 (195,902 versus 229,370). Grain cars originated on western railroads for the first 3 weeks of 2001 were down 11.7 percent compared to the first 3 weeks of 2000 (47,076 versus 53,333). Despite the decrease for the first 3 weeks of 2001, marketing representatives of BNSF and Union Pacific (UP) have indicated that the demand for grain transportation has started to pick up since the end of the year and are optimistic that this will continue until mid-February or March. They cite increased activity on Spring Wheat moving to the PNW and eastern domestic markets, as well as increased demand for soybeans moving to the PNW, the Gulf, and Mexico.

Grain shippers during the fall appear not to have been affected by any significant rail transportation problems. Ground piling of grain during the fall was not the result of transportation shortages or congestion on rail lines, but, rather, the result of large crops and large carryover stocks.

Both UP and BNSF have continued to focus on improving customer service. Except for brief periods of service disruption in those regions experiencing winter storms, the western railroads have been fluid. Service was disrupted in the second half of December due to snow in Illinois, Minnesota, and Iowa. Also, a New Year's Day ice storm and snow briefly disrupted service in the Arkansas and Louisiana regions.

With farmers holding onto much of their grain production, bidding activity for guaranteed grain cars on the two major western railroads, BNSF and UP, has been slow. Premiums in the secondary railcar market have also been nominal, except for a recent spike (\$165 premium) in the January 2001 market for BNSF railcars. Thus, both of the major western railroads currently have railcars in storage. With few exceptions, the western railroads also have had adequate power to haul the grain traffic offered. The average train speeds for the week of January 19, 2001, for all the western railroads was in the 25-mile-per-hour range, and the average speed of grain unit trains was greater than 22 miles per hour for all the western railroads. Key Rail

Performance Measures data related to rail grain transportation are included in this report.

Burlington Northern Santa Fe Railway

Grain movement on BNSF was down 8.4 percent for the year 2000 (425,849 cars versus last year's 465,088) and down 10.1 percent for the fourth quarter of 2000 (111,147 cars compared to 123,611). Although grain traffic for December 2000 increased slightly over that of December 1999, grain traffic for the first 3 weeks of 2001 is down 4.7 percent as compared to the same period in 2000 (25,776 cars versus 27,042). With grain prices beginning to move up, BNSF states that grain is beginning to move: spring wheat to the PNW and eastern domestic markets; soybeans to the PNW and Gulf. But, corn movement to the PNW is down due to stiff competition from Argentina, South Africa, and China; and shipments of HRW wheat to the Gulf are down.

As of January 20, BNSF had 26,799 covered hopper railcars in its active grain fleet, but the number in storage has been reduced to only 271 due to increased demand. Premiums for guaranteed railcars have been generally low since only 28.5 percent (3,451 of 12,141) of the guaranteed cars BNSF offered in January were sold. In February, however, BNSF sold 78.7 percent (7,645 of 9,712) of the guaranteed railcars it offered. The secondary railcar market reflects the increased movement of grain and demand for railcars, with the price of BNSF cars spiking to \$165 for January and \$55 for February.

Service on BNSF has been generally good, with BNSF averaging 90.9 percent on-time performance for the year 2000 and improving the consistency of the delivery time. The grain desk is operating well and improving on notifying customers of the impending placement of railcars. As of January 23, BNSF reported 6,696 past due railcar orders that were an average of 5.2 days late. During January, the average days late have varied from 4.3 days as of January 9 to 6.4 days late as of January 2. BNSF states that it has been running 4 to 5 days late on guaranteed railcars and 6 to 8 days late on tariff railcars. With its systemwide grain unit trains averaging between 22 and 25 miles per hour during January, grain fleet cycle time is currently around 28 days.

All of the yards seem to be relatively fluid, with the simple average reported terminal dwell time for the 3 weeks ending January 19 being about 27.5 hours compared with 24.3 hours for the first quarter of 2000 and 30.7 hours for the month of December.

Kansas City Southern Lines

Grain originated on the Kansas City Southern railroad (KCS) was down 21.8 percent for the year 2000 (26,515 cars loaded, compared to 33,911 for 1999) and down 30.6 percent in the fourth quarter (5,392 cars versus 7,764). Grain traffic for the first 3 weeks of 2001 is down 34 percent from that originated in the same period of 2000 (1,300 cars compared to 1,970). Since the base of KCS's grain traffic is to domestic destinations, KCS expects consistent demand for 2001. Although its export market is limited at this time, KCS did move a little grain to Mexico in December.

KCS has overhauled its main north-south line over which most of its grain traffic moves. Grain unit trains on KCS were traveling at speeds of 23.0 to 24.9 miles per hour during January. The rehabilitation should improve service and turnaround times for KCS over last year when major delays occurred. The simple average of the reported terminal dwell times for the 3 weeks ending January 19 is 27.4 hours, ranging from 19.0 hours at Jackson, MS, to 34.0 hours at Shreveport, LA. This compares to simple average dwell times of 22.3 hours for the first quarter of 2000 and 23.5 hours for December.

KCS reports its grain car fleet at 3,365 covered hoppers as of January 15. Of this fleet, 600 railcars were reported in service to processors, 2,395 railcars were in guaranteed service programs, and 34 railcars were in bad order. Outstanding orders for grain cars totaled 3,181 for the 4-week period beginning January 8. The late December ice storm in Arkansas put KCS 1 week behind on railcar placements, but railcar placements are current now. KCS states that it has adequate power and railcars available and that railcar guarantees have been trading at low premiums or at discounts.

Union Pacific Railroad

Grain movements on the UP were down 8.4 percent for the year 2000 compared to 1999 (364,785 railcars versus 398,262) and down 19.0 percent for the fourth quarter of 2000 compared to the same period in 1999 (79,363 railcars versus 97,995). Although grain carloads originated for the first 3 weeks of 2001 are down 17.7 percent from the comparable period in 2000 (20,010 railcars compared to 24,321), UP states that the demand for grain transportation has picked up since December. Wheat movement has been stable to slightly higher, and there has been more activity on corn and soybeans to the Gulf and Mexico.

As of January 1, UP had 28,975 covered hopper railcars in its active grain fleet. For each of the first 3 months of 2001, approximately 3,000 of these railcars have been allocated to shuttles, approximately 3,500 have been assigned to agricultural products, approximately 12,000 have been assigned to guaranteed freight pools, and approximately 5,400 have been offered on voucher programs. UP states that it currently has covered hopper railcars in storage and, thus, will have plenty of railcars to meet demand. Due to the adequate availability of railcars, bids for guaranteed railcars have been weak and at nominal premiums.

Service on UP has been consistently improving since the end of 1998. Weather problems in Minnesota, Iowa, and Arkansas resulted in some delays during December, but the weather is now relatively good, and UP is fluid. UP reports that the average train speed for grain unit trains was 22.9 miles per hour for the week ending January 19, 2001. UP states that it has adequate locomotive power and is currently not holding many grain trains for power.

UP states its yards are operating smoothly. The simple average of the dwell times for the 3 weeks ending January 19 is 32.4 hours. This compares to a simple average of 32.6 hours for the first quarter of 2000 and 33.2 hours for December.

Eastern Railroads

Grain cars originated on the eastern railroads for the year 2000 increased 5.4 percent over those originated in 1999 (301,613 railcars compared to 286,058) and increased 1.4 percent over those originated on those lines in 1998.³ This indicates that the eastern railroads have recovered much of the grain traffic lost due to the service disruptions that began in the latter half of 1999. Grain cars originated in the fourth quarter of 2000 increased 12.1 percent over the comparable period in 1999 (84,378 railcars versus 75,248) but were still 1.5 percent less than those originated in the comparable period of 1998. This recovery of grain traffic continued into the first 3 weeks of 2001, up 9.2 and 26.9 percent, respectively, compared to the comparable periods of 2000 and 1999.

³ All traffic comparisons exclude Illinois Central, which, in the fourth quarter of 2000, began to report its cars originated as part of those originated by Canadian National. This leaves only the comparison of current rail traffic on CSXT and NS to that of CSXT, NS, and Conrail in prior years. Due to the service disruptions that occurred after the split of Conrail in June of 1999, traffic comparisons must go back to 1998 to be relevant.

CSX Transportation

Although grain movements for the year 2000 on CSX Transportation (CSXT) increased by 11.8 percent over those in 1999, the comparison is faulty since it does not consider CSXT's share of Conrail traffic for the first 5 months of 1999.⁴ Grain originated by CSXT for the second half of 2000 and the fourth quarter of 2000 increased by 8.8 percent and 12.3 percent, respectively, over that in comparable periods of 1999. However, as discussed in the section on eastern railroads, these traffic increases represent mainly a recovery of traffic not handled during the postsplit traffic disruptions. Grain traffic for the first 3 weeks of 2001 increased 9.6 percent over that in the comparable period of 2000. CSXT expects the increase in grain traffic to continue into February. CSXT's feed grain market has remained about the same during January, but soybean traffic to domestic processors has been down about 25 percent due to inventory reductions. However, CSXT reports that transportation demand for January exports of soybeans and corn to Atlantic ports has increased by 56 percent.

CSXT reports that its supply of covered hopper railcars is currently a little tight due to strong fertilizer markets in January. CSXT expects this to continue into February. Despite the tight supply of railcars, more than 70 percent of the less-than-trainload railcar orders are being filled within the week. The availability of locomotive power and crews, however, is good. In addition, CSXT reports good cycle times, due in part to emphasis on shuttle and unit trains. Like the western railroads, CSXT wants its grain customers to ship by unit trains made up of 65 railcars or more. In the near future, CSXT is looking to encourage even larger grain unit trains. CSXT plans to begin work soon on its Nashville, TN, yard, which will temporarily slow traffic routed through Nashville.

The number of railcars on line has continued to decrease, from an average of 266,913 in January 2000 to 247,392 for the week ending January 19, 2001 (table 13). This trend indicates that traffic is moving through the rail system and being delivered to customers rather than sitting idle. CSXT's average train speed has increased from 18.4 miles per hour in January 2000 to 21.4 miles per hour for the week ending January 19, 2001 (table 14). The average speed of CSXT's grain unit trains has increased from 16.6 miles per hour in

January 2000 to 20.5 miles per hour for the week ending January 19, 2001. In addition, the average dwell time for CSXT has continued to improve. The simple average of dwell times for December 2000 was 36.1 hours compared to 30.4 hours as of the week ending January 19, 2001 (table 15). As of January 24, CSXT reported a weighted average dwell time of 26.8 hours, which is much better than its goal of 28.4 hours.

Norfolk Southern

Although grain movements for the year 2000 on Norfolk Southern (NS) increased by 11.2 percent over those in 1999, this comparison is faulty since it does not consider NS's share of Conrail traffic for the first 5 months of 1999. Grain originated by NS for the second half of 2000 and the fourth quarter of 2000 increased by 11.4 percent and 12.0 percent, respectively, over comparable periods in 1999. However, as discussed in the section on eastern railroads, these traffic increases represent mainly a recovery of traffic not handled during the post split traffic disruptions. Grain traffic for the first 3 weeks of 2001 increased 8.8 percent over that in the comparable period of 2000. NS expects the demand for grain transportation in 2001 to be similar to that of 2000. Transportation of grain to the DelMarVa region is expected to be down until March, and NS does not expect an increase in export grain.

NS has a supply of approximately 6,000 covered hoppers. Last year, NS began using 75-car dedicated feed train service to feed mills in the Southeast and other grain receivers. The use of unit trains should increase NS's capacity to haul grain by decreasing the average cycle time for its railcar fleet. NS expects its power to remain approximately the same as last year, although it plans to purchase a small number of locomotives. NS currently has 3,428 locomotives in its fleet, 3,182 of which are available for service.

On January 24, NS announced plans to restructure its rail network over the next year in an effort to improve profitability. The restructuring includes plans to lay off as many as 2,000 of its 32,341 employees, sell 12,000 of its 130,000 freight cars, and sell or abandon 3,000 to 4,000 track miles. The effect of this restructuring on future service levels remains to be seen.

NS lines are much less congested since the number of railcars on line has decreased from an average of 223,056 in the first quarter of 2000 to only 206,280 on January 19, 2001. The average train speed has increased from 19.9 miles per hour during the first quarter of 2000 to 21.7 miles per hour for the week ending January 19, 2001. The average train speed for

⁴ NS and CSXT's division of Conrail became effective on June 1, 1999. Thus, valid traffic comparisons for each of the remaining railroads (NS and CSXT) must compare periods subsequent to the division of Conrail.

Table 13—Freight cars on line, January-December 2000

Car type/railroad	January	February	March	April	May	June	July	August	September	October	November	December	January '01
All U.S. freight cars:							Number of railcars						
Burlington Northern Santa Fe	204,125	204,645	206,865	205,709	201,779	203,131	204,701	204,357	206,490	207,796	207,235	206,704	202,005.00
CSX Transportation	266,913	266,883	268,606	270,927	265,233	260,638	256,883	253,008	249,186	248,005	246,004	248,064	249,615.00
Kansas City Southern Railway	29,191	29,256	29,368	28,723	29,621	29,740	29,892	30,430	28,688	29,359	29,334	28,272	28,923.00
Norfolk Southern	225,989	224,238	219,764	219,539	218,731	218,862	214,278	213,263	212,098	213,211	211,453	208,265	206,301.00
Union Pacific	310,167	310,508	312,107	309,628	308,398	312,141	317,419	316,060	319,054	319,072	316,915	314,298	314,751.00
All U.S. railroads	1,036,385	1,035,530	1,036,710	1,034,526	1,023,762	1,024,512	1,023,173	1,017,118	1,015,516	1,017,443	1,010,941	1,005,603	1,001,595
U.S. covered hoppers:													
Burlington Northern Santa Fe	60,763	61,756	62,438	61,752	59,264	58,925	60,672	61,425	62,337	62,854	61,259	61,360	60,079.00
CSX Transportation	65,397	65,553	65,780	66,023	63,981	62,449	61,345	60,485	60,084	61,269	60,908	60,702	61,554.00
Kansas City Southern Railway	8,265	8,236	8,320	8,314	8,689	8,707	8,757	8,755	8,140	8,270	8,834	8,225	8,245.00
Norfolk Southern	45,967	46,128	45,791	45,522	44,928	44,176	43,243	43,041	43,243	44,021	44,263	42,468	43,072.00
Union Pacific	99,207	98,515	98,032	97,653	96,301	96,412	97,882	99,116	101,084	101,055	100,822	100,142	99,423.00
All railroads	279,599	280,188	280,361	279,264	273,163	270,669	271,899	272,822	274,888	277,469	276,086	272,897	272,373
All Canadian freight cars:													
Canadian National	115,044	115,966	114,541	112,755	106,511	104,640	104,618	107,918	110,414	75,533	114,245	114,385	114,852.00
Canadian Pacific	82,930	78,645	77,856	76,161	78,162	70,001	71,829	71,988	74,712	74,261	76,269	73,762	73,710.00
All Canadian railroads:	197,974	194,611	192,397	188,916	184,673	174,641	176,447	179,906	185,126	149,794	190,514	188,147	188,562

Notes: The number of cars on line is a weekly average of the inventory of railroad and privately owned freight cars on each railroad's system.

For information and specific definitions for individual railroads, see www.railroadpm.org.

Source: Association of American Railroads, Railroad Performance Measures

Table 14—Average train speed, January-December 2000

Train type/railroad	January	February	March	April	May	June	July	August	September	October	November	December	January '01
							Miles per hour						
All U.S. trains:													
Burlington Northern Santa Fe	26.4	27.0	26.7	26.9	26.2	25.8	25.5	25.5	25.5	25.0	24.5	22.9	26.0
CSX Transportation	18.4	18.2	17.9	17.6	17.6	18.6	19.7	19.6	20.0	19.9	21.0	20.8	20.8
Kansas City Southern Railway	25.3	24.9	25.2	25.7	25.5	24.2	24.4	23.2	23.9	21.9	21.9	25.1	24.2
Norfolk Southern	19.3	19.9	20.4	20.2	19.8	19.5	21.0	20.6	20.9	20.6	18.4	20.8	21.5
Union Pacific	26.0	26.1	26.0	26.2	25.9	25.9	24.9	24.1	23.9	24.0	25.2	25.0	25.9
Ave. all U.S. Railroads	23.1	23.2	23.2	23.3	23.0	22.8	23.1	22.6	22.8	22.3	22.2	22.9	23.7
U.S. grain trains:													
Burlington Northern Santa Fe	23.4	23.8	22.7	23.6	22.6	22.9	22.6	22.3	22.3	21.7	21.7	19.1	23.2
CSX Transportation	16.6	17.3	17.1	15.6	15.9	16.4	19.8	18.2	18.8	24.5	19.6	19.3	18.7
Kansas City Southern Railway	23.1	23.2	23.6	25.2	24.7	21.6	23.1	22.5	26.2	23.0	19.1	25.9	23.7
Norfolk Southern	14.8	16.3	17.0	18.7	17.0	16.6	17.6	17.4	18.6	16.9	15.0	19.0	19.6
Union Pacific	23.9	24.3	24.6	24.7	24.7	24.7	23.7	22.1	22.1	23.8	23.4	22.0	22.8
Ave. All railroads	20.4	21.0	21.0	21.6	21.0	20.4	21.4	20.5	21.6	22.0	19.8	21.1	21.6
All Canadian trains:													
Canadian National	24.3	24.5	24.9	25.3	25.2	24.5	25.7	25.0	24.9	25.1	24.6	24.2	24.0
Canadian Pacific	26.9	26.5	27.3	27.5	26.9	26.4	27.6	27.4	26.9	26.1	26.7		
Ave. all Canadian railroads	25.6	25.5	26.1	26.4	26.1	25.5	26.7	26.2	25.9	25.6	25.7	24.2	24.0

Notes: Average train speed is calculated by dividing train-miles by hours operated for the line-haul portion of the movement and excludes time spent in terminals (dwell time). For information and specific definitions for individual railroads, see www.railroadpm.org.

Source: Association of American Railroads, Railroad Performance Measures

Table 15—Average dwell times for selected terminals by railroad, January-December 2000

Railroad/selected terminal/city and State	January	February	March	April	May	June	July	August	September	October	November	December	January '01
Burlington Northern Santa Fe:							Hours						
Barstow, CA	27.0	26.0	26.0	27.0	28.0	29.0	28.0	30.0	27.0	29.7	30.0	29.0	26.3
Fort Worth, TX	18.0	21.0	24.0	23.0	23.0	28.0	26.0	27.0	28.0	27.3	28.0	32.0	32.3
Houston, TX	15.0	16.0	16.0	15.0	16.0	17.0	17.0	16.0	16.0	19.7	18.0	19.0	19.0
Kansas City-Argentine, KS	28.0	26.0	26.0	25.0	26.0	27.0	27.0	27.0	28.0	29.7	30.0	33.0	27.0
Minn./St. Paul-Northtown, MN	30.0	28.0	28.0	28.0	26.0	27.0	27.0	26.0	29.0	28.3	28.0	35.0	29.7
Pasco, WA	22.0	24.0	23.0	21.0	21.0	21.0	21.0	21.0	22.0	29.3	23.0	23.0	21.3
CSX Transportation:													
Cincinnati, OH	41.2	36.9	32.7	31.0	27.5	25.6	27.4	26.0	27.7	26.2	26.3	30.0	30.4
Corbin, KY	24.4	25.7	22.2	24.1	22.3	18.9	26.4	23.1	24.8	25.3	22.0	29.1	27.8
Hamlet, NC	43.9	37.9	39.2	36.5	35.8	36.1	27.3	27.5	27.5	26.1	28.5	35.3	34.0
Louisville, KY	48.6	37.9	39.3	41.8	33.9	32.2	32.4	33.9	34.0	35.0	33.0	39.6	38.4
Nashville, TN	44.8	37.5	37.0	42.6	37.5	31.1	36.1	31.6	28.6	32.7	30.0	35.6	37.9
Kansas City Southern Railway:													
Kansas City, MO	18.0	21.0	20.0	17.0	16.0	17.0	18.0	22.0	23.0	24.7	22.0	24.0	30.0
Shreveport, LA	30.0	32.0	25.0	27.0	27.0	30.0	30.0	34.0	34.0	32.5	36.0	32.0	32.0
Norfolk Southern:													
Chattanooga, TN	32.2	31.9	28.9	38.1	33.6	32.2	28.6	26.4	28.7	28.4	31.0	28.9	32.0
Columbus, OH	28.9	29.8	25.0	26.8	28.6	35.3	30.3	33.8	32.6	34.4	37.1	36.7	32.0
Knoxville, TN	27.6	31.4	33.7	29.0	34.5	34.2	30.6	31.6	31.0	33.8	31.5	38.0	39.8
Linwood, NC	39.6	33.9	35.3	31.5	28.8	31.0	29.6	27.2	28.5	31.1	30.3	31.0	35.4
Macon, GA	31.1	29.4	29.4	28.9	26.6	28.7	26.1	27.4	25.7	28.9	26.4	29.6	31.5
Union Pacific:													
Houston-Englewood, TX	36.6	31.4	36.2	34.3	36.0	44.3	37.2	44.4	43.1	44.4	44.9	32.3	36.0
Houston-Settegast, TX	34.4	38.8	38.9	35.5	39.7	41.7	41.5	38.0	39.7	46.3	46.2	38.5	34.9
Roseville, CA	28.5	29.6	34.3	30.5	29.9	27.6	28.7	29.6	32.1	30.7	31.3	33.0	35.5
Kansas City-Neff, MO	35.1	32.9	37.2	31.4	31.4	32.9	34.1	33.2	32.1	37.5	31.9	37.6	35.8
North Platte-East, NE	28.7	26.4	27.0	29.1	28.6	23.5	25.2	24.4	25.3	26.3	28.4	29.3	26.2
North Platte-West, NE	27.8	30.5	33.8	38.5	36.0	24.5	25.0	26.8	25.5	28.2	33.8	30.0	26.4
Fort Worth-Centennial, TX	27.5	29.7	31.9	35.3	30.0	33.7	36.3	33.1	33.2	35.6	38.3	36.2	30.4

Notes: Dwell time is the total time, on average, that a car spends at a terminal location. A terminal can be a single or multiple yard facility.

For information on additional terminals and specific definitions for individual railroads, see www.railroadpm.org.

Source: Association of American Railroads, Railroad Performance Measures

grain unit trains has also increased from 16.0 miles per hour in the first quarter of 2000 to 20.3 miles per hour for the week ending January 19, 2001. The average terminal dwell time has also decreased from a simple average of 31.2 hours for the first quarter of 2000 and 31.8 hours for December 2000 to 29.6 hours for the week ending January 19, 2001.

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Truck Situation

Limited crude oil supplies on the world market may create instability in short-term prices. This exerts pressure on the grain hauling markets, which historically maintain thin margins for movement of grain to market. Therefore, haulers attempting to offset these volatile costs onto agricultural shippers may find resistance to these additional costs. In addition, longer term market drivers, such as recent regulatory and legislative proposals, may also influence the motor carrier and grain transportation systems in 2001 and beyond.

Fuel Prices

The concerns over crude oil prices will continue to influence and harness truck operations and earnings. Diesel fuel markets experienced high costs and volatile pricing throughout 2000. These variables whittled away at the smaller operating margins for some established trucking firms. As a result, the rising trend of trucking industry bankruptcies could continue.

Recently, the benchmark indicator found at the New York's Mercantile Exchange for West Texas Intermediate crude oil trended downward, as the commodity came in at \$34.30 per barrel in November and at \$28.40 in December.⁵ Accordingly, on-highway data for diesel prices at the pump corresponded to these changes.

Figure 3 indicates that the national average for diesel fuel prices reached its apogee the week of October 16, 2000, at \$1.67 per gallon (at the peak of the shipping season). Since then, diesel prices, while still volatile on average, have trended downward. In comparison, the table also shows that prices from the chief grain producing States were equally unstable but remained lower on average when viewed against the national prices

(e.g., Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Texas, Washington, and Wisconsin).

For the near term, recent concerns over crude oil supplies have generally eased, but minor disruptions may still occur. Stocks appear to have narrowed the gap from the measured levels a year ago. Supplies are down to 3 percent, whereas supplies carried a shortfall of 14 percent last year. Home heating fuel stocks (which are typically scrutinized during this period because they tend to affect prices at the pump during the winter) show signs of improvement. However, if surges in demand for heating oil occur in the short term, then there may still be a risk of instability with occasional spikes in prices, especially if the remainder of the winter weather is unusually cold in the Northeast.⁶

Production levels of American imported crude are managed primarily by the Organization of the Petroleum Exporting Countries (OPEC). OPEC manages 40 percent of the world's oil, which, in turn, influences world oil prices.⁷ Recently OPEC announced a cut of 1.5 million barrels of crude a day in order to support prices. Therefore, OPEC's output should drop to 25.2 million barrels a day. By limiting production, OPEC hopes to stabilize and/or support prices between \$22.00 to \$28.00 a barrel.⁸

Regulatory and Legislative Updates

Recent and significant regulatory and legislative impacts for the grain hauling industry have occurred. First, the U.S. Environmental Protection Agency (EPA) announced its final rules for diesel emissions standards in trucks. Second, the U.S. Department of Transportation (DOT) recently concluded its consideration of new proposed rules governing the hours of service for truckers. It remains unclear whether the proposal to maintain the current hours of service exemptions for agricultural hauling will be maintained. This exemption assists agricultural truckers, given the seasonal logistics of the industry. Third, USDA announced new methods for agricultural commodity handling. Fourth, the motor fuel surcharges may be given new life now that Congress has reconvened. Each of these developments merits a brief discussion.

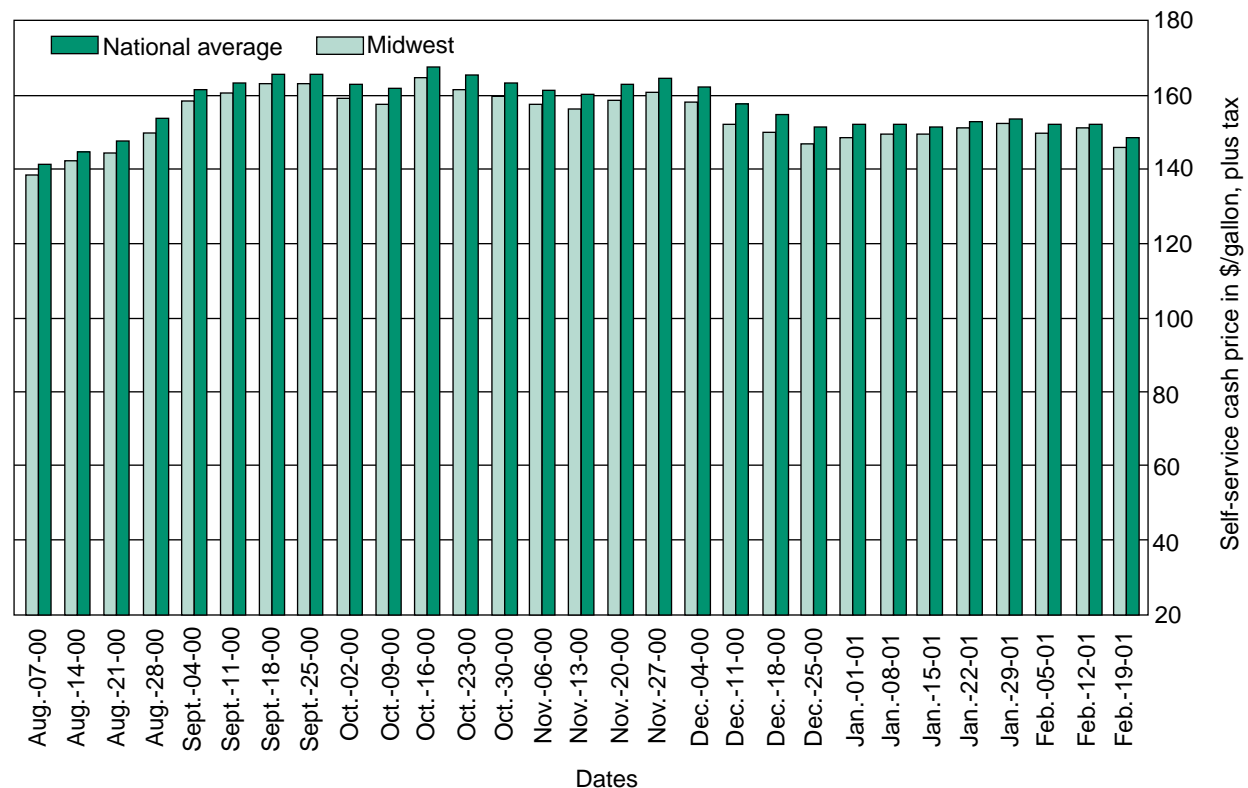
⁵ Cf. London International Petroleum Exchange, Brent Crude Oil from the North Sea at \$35.00 in October 2000.

⁶ Department of Energy, Energy Information Agency, Short-Term Energy Outlook, January 2001, p.4.

⁷ Department of Energy, Energy Information Agency, OPEC Fact Sheet, January 2000, at www.eia.doe.gov/eneu/cabs/opec.html.

⁸ Banerjee, Neela, "OPEC Ratifies Oil Cutback; Iraq Remains a Puzzle," The New York Times, 1/18/01.

Figure 3—U.S. On-Highway Diesel Prices - August 7, 2000 – February 19, 2001



Source: U.S. Department of Energy, Energy Information Agency @ www.eia.doe.gov, "EIA Retail On-Highway Diesel Prices."

Final EPA Diesel Regulations

In May 2000, EPA proposed to cut diesel emissions from heavy trucks by 90 percent by requiring devices such as catalytic converters on trucks to further reduce sulfur emissions levels in diesel by as much as 97 percent. On December 21, 2000, the proposed rules became final.⁹ While environmental groups cheered the proposal, it throttled trucking interests that already face tougher emission rules of compliance in 2002. Various agricultural marketing, energy, refining, and hauling interests remain concerned that EPA focused solely on the trucking mode, while ignoring emissions from the other modes and sources, such as railroad locomotives.¹⁰ For its part, EPA notes that diesel is a contributing factor in as many as 15,000 deaths. This includes 1 million cases of respiratory ailments per year, with an estimated 400,000 individual asthma cases in children annually.¹¹ The industry has the flexibility to meet these

new standards through a phased-in approach beginning in 2007 and ending in 2010.

Proposed DOT Hours of Service Regulations

In June 2000, DOT's newly created Federal Motor Carrier Safety Administration (FMCSA) proposed new rules to govern the amount of hours truckers must drive in the interest of highway safety. FMCSA argues that the present rules promulgated in 1937 no longer match the hours and truckload stresses for on-road activity and modern-day commerce. While consideration for comment of these rules has concluded, the outcome is still pending. FMCSA received 50,000 comments on this proposed rule. In addition, last December, Congress enacted an attached rider to the transportation appropriations bill that suspended action on the rule. What is absent from the proposed rules are the current exemptions for the agricultural trucker. The exemptions permit flexibility and timely just-in-time supply chain management during the peak planting and harvesting seasons. Should the rules become effective, this may hamper commercial (for-hire) transportation providers.

⁹ See EPA rules at www.epa.gov/otaq/hd-hwy.htm.

¹⁰ Cf., Oil & Gas Journal On-Line, "Specialty fuels blamed for transportation problems," 1/11/01, at www.ogj.pennnet/Content.

¹¹ Schulz, John D., "Cleaner Air?"

New Law for Transporting Grain Commodities

The U.S. Grain Standards and Warehouse Improvement Act of 2000 (PL. 106-472) was signed into law by President Clinton in January 2001. The legislation safeguards and streamlines storage and shipping of agricultural goods and provides for the use of electronic receipts in federally licensed warehouses. The law will be implemented and administered through USDA's Grain Inspection, Packers, and Stockyards Administration. This legislation should facilitate the management of the supply chain with electronic documentation for all major commodities, thereby bolstering a reliable, competitive, and efficient logistics system for the grain hauling trade.

Revisited Motor Fuel Surcharge Legislation

In the early fall, Congress considered new legislation to respond to the sporadic fuel prices witnessed at the pump. The bill would have allowed owner-operators and small and large fleets to offset their increased cost for fuel when fuel prices rise rapidly and unexpectedly. It would also permit fuel surcharges onto shippers for the cost of fuel. The bill, sponsored by Representatives Nick Rahall (D-WV) and Roy Blunt (R-MO), cleared the House floor by a unanimous vote (which signifies strong bipartisan support). After a brief recess for the national election, the Senate did not consider the measure in December. However, the 107th Congress may reconsider the bill. Historically, truckers have found it difficult to adjust to such changes, especially with fuel price volatility (discussed above). As a result, trucking firms tend to realize substantial and viable losses (also discussed above). If the bill is signed into law, it may help truckers, both large and small, adjust to the volatile fuel markets. It may also act as a stabilizing tool for fleet and logistics managers in the grain hauling industry and, thereby, benefit the entire grain hauling supply chain while enhancing agricultural markets.

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